

# WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

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March 31, 2006

TO: Internal File

THRU: Pamela Grubaugh-Littig, Permit Supervisor *pgl*

FROM: Steve Fluke, Reclamation Hydrogeologist  
*SMP*

RE: 2005 Second Quarter Water Monitoring, West Ridge Resources, West Ridge Mine, C007/0041-WQ05-2, Task ID #2865

1. Was data submitted for all required monitoring sites? YES [ X ] NO [ ]

The West Ridge Mine is currently operational. Water monitoring data is evaluated from the data that is submitted quarterly by the mine to the Division EDI database. Water monitoring protocols, and surface, groundwater and monitoring wells, and UPDES sample parameters are outlined in the mine's MRP on Tables 7-1, 7-2, 7-3, and 7-4, respectively.

**Surface** *Operational sampling is required quarterly for five stream monitoring sites (ST-3, ST-4, ST-8, ST-9, and ST-10). There are four stream monitoring sites (ST-5, ST-6, ST-6A, and ST-7) that are equipped with automatic samplers that are required to be checked following precipitation events.*

All surface monitoring sites were sampled and data submitted for the 2005 second quarter monitoring.

**Groundwater and Wells** *Operational sampling is required quarterly for eight spring monitoring sites (SP-12, SP-13, SP-15, WR-1, WR-2, SP-16, SP-8, and S-80) and one groundwater monitoring well site (DH 86-2).*

All groundwater and well monitoring sites were sampled and data submitted for the 2005 second quarter monitoring.

**UPDES** *Operational sampling is required monthly for two active UPDES sites (D001 and D002).*

All UPDES sites were sampled and data submitted for the 2005 second quarter monitoring.

2. Were all required parameters reported for each site? YES [ X ] NO [ ]

**Surface** All required parameters were reported.

**Groundwater and Wells** All required parameters were reported.

**UPDES** All required parameters were reported.

3. Were any irregularities found in the data? YES [ X ] NO [ ]

**Surface** No irregularities were found in the data with the following exceptions:

**ST-5** - Total dissolved solids (TDS), sulfate, and dissolved magnesium, and potassium were reported above two standard deviations. This is not uncommon for this site that uses an automatic sampler to collect surface water following a storm event.

**ST-6A** – The first flow was reported since 1997 at 15 gpm attesting to the wetter than normal spring.

**Groundwater and Wells** No irregularities were found in the data with the following exceptions:

**SP-15** – TDS, total hardness, dissolved calcium, magnesium, sodium, and sulfate were reported above two standard deviations likely due to low flow.

**SP-16** – Total hardness and dissolved magnesium were reported above two standard deviations. This site has no prior history of elevated constituent concentrations. Continue monitoring for trends.

**WR-1** – Total hardness and dissolved magnesium were reported above two standard deviations. This site has no prior history of elevated constituent concentrations. Continue monitoring for trends.

**DH 86-2** – TDS, total hardness, dissolved calcium, magnesium, and sulfate were reported above two standard deviations. The well water analysis has detected elevated concentrations of some constituents in the past, but no trends are apparent. Continue monitoring for trends.

**UPDES** No irregularities were found in the data with the following exceptions:

**D002** – The calculated TDS for the mine water discharge exceeds the maximum limit of 2,000 lbs/day for April, May, and June and the reported total iron concentration exceeds the maximum limit of 1.0 mg/L for May and June. In

addition, after discussing the matter with Jeff Studenka of the Utah Division of Water Quality, it was discovered that some of the effluent discharge and TDS data input in the EDI database does not match the DMR data as it should.

**4. On what date does the MRP require a five-year resampling of baseline water data?**

Five-year baseline resampling is to occur at the time of the mid-term review. The next baseline resampling should be conducted by October 1, 2006.

**5. Based on your review, what further actions, if any, do you recommend?**

**Surface** Continue discussions with the Permittee and mine hydrologist regarding whether the automatic sampling method for some of the stream sites can be improved upon.

**Groundwater and Wells** None.

**UPDES** Follow up on the ongoing discussions between Jeff Studenka of the Utah DWQ and the mine to possibly amend the UPDES permit to account for TDS concentrations that exceed the daily maximum load. Determine if and/or why there is a discrepancy between the data input to the EDI database and the DMR data submitted to DWQ. Correct this problem as necessary.

**6. Does the Mine Operator need to submit more information to fulfill this quarter's monitoring requirements?** YES [ ] NO [ X ]

**7. Follow-up from last quarter, if necessary. Did the Mine Operator submit or provide an explanation for missing and/or irregular data?**

No unresolved issues from last quarter. The mine is pursuing a new UPDES permit and the possibility of joining the salinity offset program.